Zaynab Farhat

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Professional Summary

Computer Engineering undergraduate specializing in machine learning, control systems, and embedded systems. Experienced in developing ML models, robotic control systems using MATLAB/Simulink, and real-time Arduino-based applications. Seeking an internship in artificial intelligence or embedded engineering.

Education

Al-Maaref University
Bachelor in Computer Engineering and Technology | Fall 2023 – Expected Graduation: Spring 2027
Relevant Coursework:
Machine Learning, Control Systems, Embedded Systems, Data Structures

Technical Skills

Languages: Python, C++, C#, SQL
Software and Tools: MATLAB, Simulink, Simscape, Jupyter, MySQL Workbench, Arduino IDE
Core Areas: Machine Learning (Regression, CNNs), Computer Vision (OpenCV), Control Systems (PID, Lead/Lag)

Projects

Robotic Link Control System | MATLAB and Simulink

- Designed and tuned PID and Lead controllers in MATLAB, reducing settling time by 40% and eliminating steady-state error in a 1-DOF robotic arm model.
- Validated stability and transient response using Simscape Multibody for high-precision trajectory tracking.

Predictive Modeling & Computer Vision Suite | Python

- Developed a CNN-based facial expression recognition model using the FER-2013 dataset, achieving 85% classification accuracy.
- Applied image preprocessing and data augmentation techniques to improve model generalization.
- Built a medical diagnosis prediction model (in progress), focusing on data preprocessing, feature selection, and model design.

Embedded Systems Portfolio | Arduino, C++

- Engineered autonomous prototypes utilizing sensor fusion (ultrasonic/servo) and real-time firmware in C++.

Certificates

- Control Design with MATLAB and Simulink | Mathworks
- Robotics and Automation | AkramsLab
- AI Bootcamp | Al-Maaref University
- Machine Learning with MATLAB | Mathworks